Designing a Wind Turbine

Your engineering firm has been contacted by Vin-Tel, a start-up company that works with alternative energy. Vin-Tel wants your firm to design a Wind Turbine they can use as an alternative energy source, to reduce the country’s dependence on fossil fuels. Your firm is to do develop the turbine blade configuration what will generate the most power.

Your team is competing against engineering firms to come up with the best blade design. Your deliverable to Vin-Tel is a presentation in which you provide the following information:

1. A description of your turbine blade configuration including material used.
2. A justification for the design of your blade configuration.
3. Data showing the effectiveness of your blade configuration compared to other configurations you tried.
4. Data showing the effectiveness of your blade configuration in high and low wind speeds.
5. Demonstration of your blade configuration in action.

MATERIALS

|  |  |
| --- | --- |
| Wind turbine generator | Voltage Probe |
| Two-speed fan to simulate wind | Current Probe |
| other available supplies |  |
|  |  |

REferences

Some references you might use in this project are:

1. <http://www.kidwind.org/students_teachers/lesson_bladedesign.php>
2. <http://www.kidwind.org/students_teachers/vernier_lessons.php>